

The Intelligence Guard for ONI Replication (IGOR)

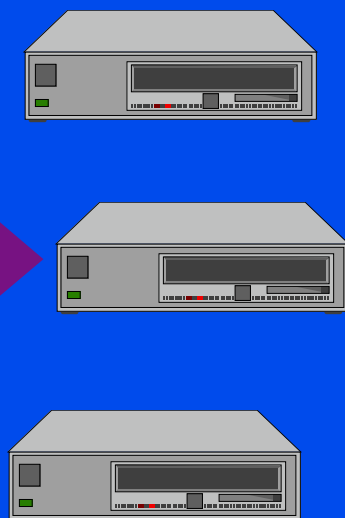
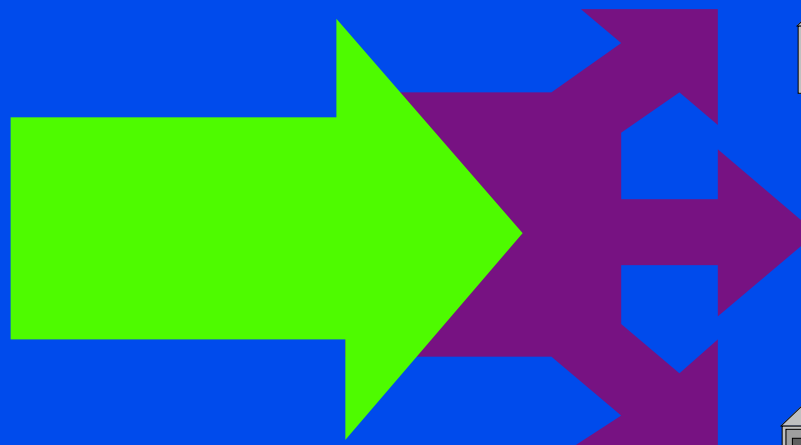
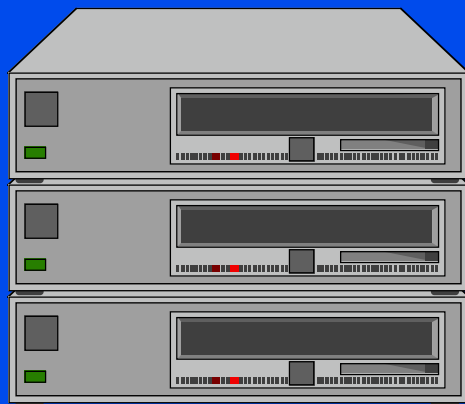
Dr. Robert W. Shore

The ISX Corporation

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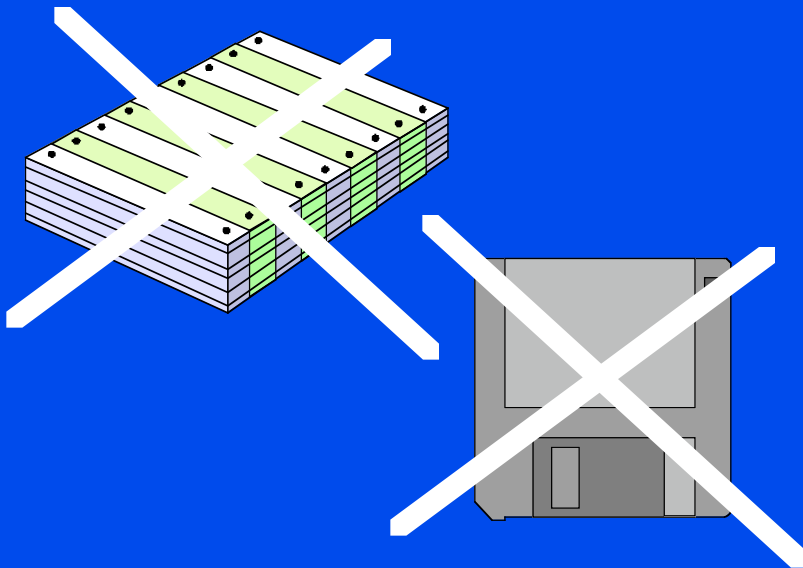
703-558-7800V, 703-558-7895F

Genesis: The Good Idea

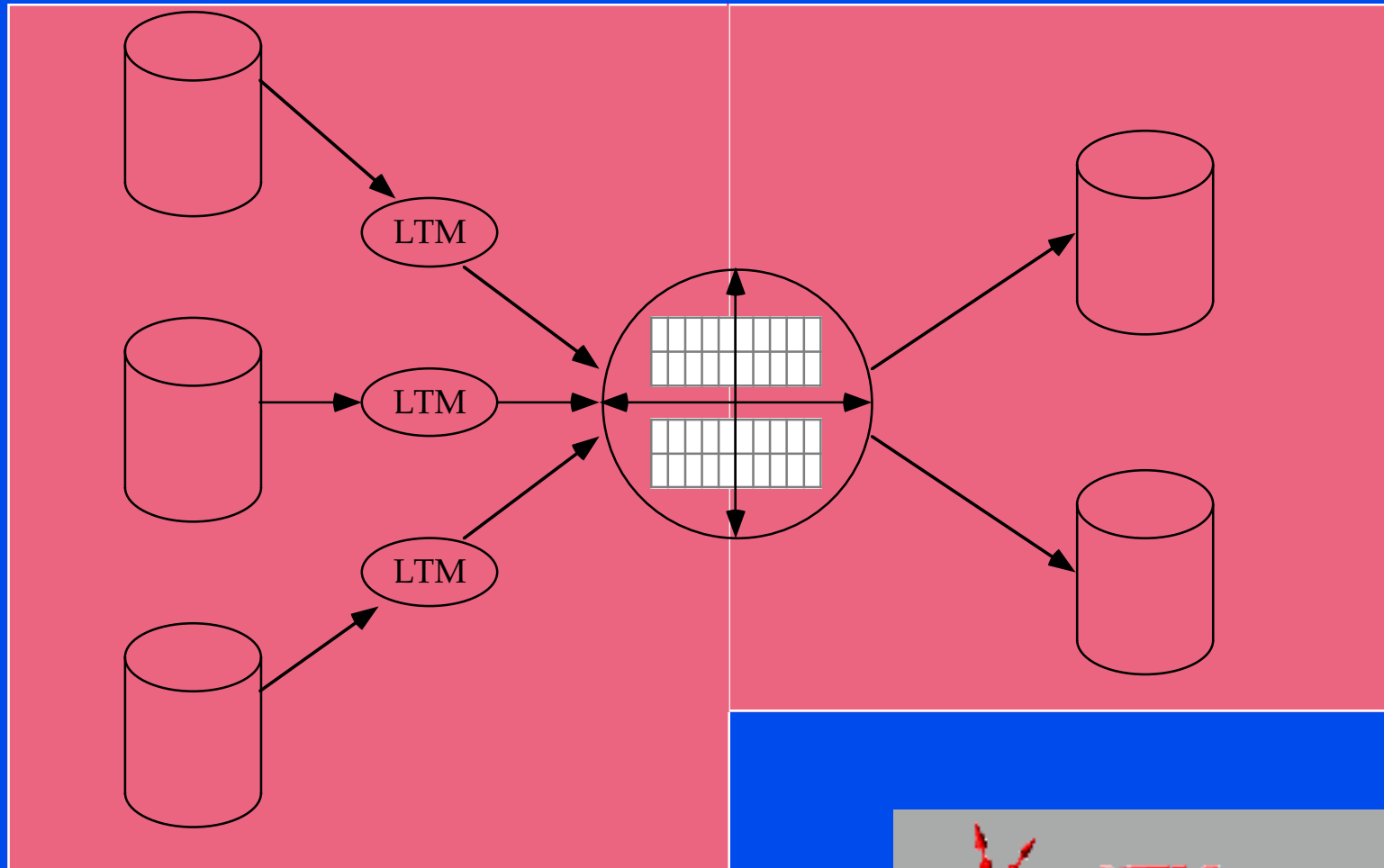


Genesis: Challenges

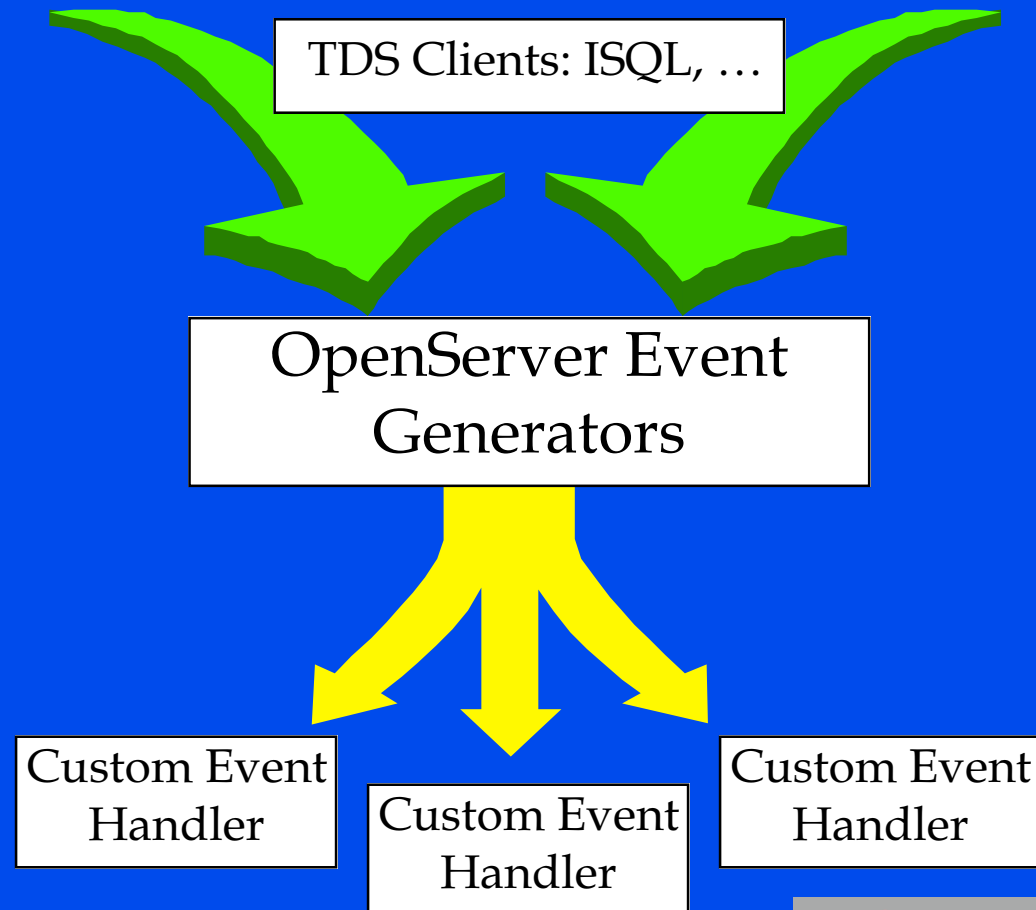
- Near real-time
- Database-to-database communication
- SCI to SECRET (or whatever)



Technology: Sybase Rep Server

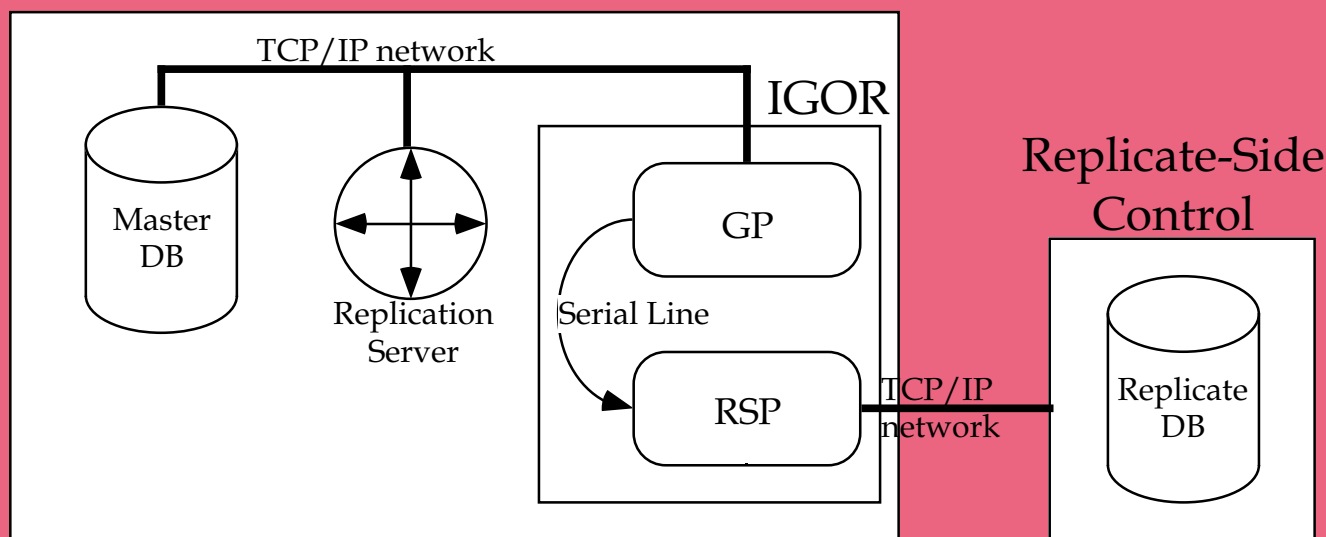


Technology: Sybase OpenServer

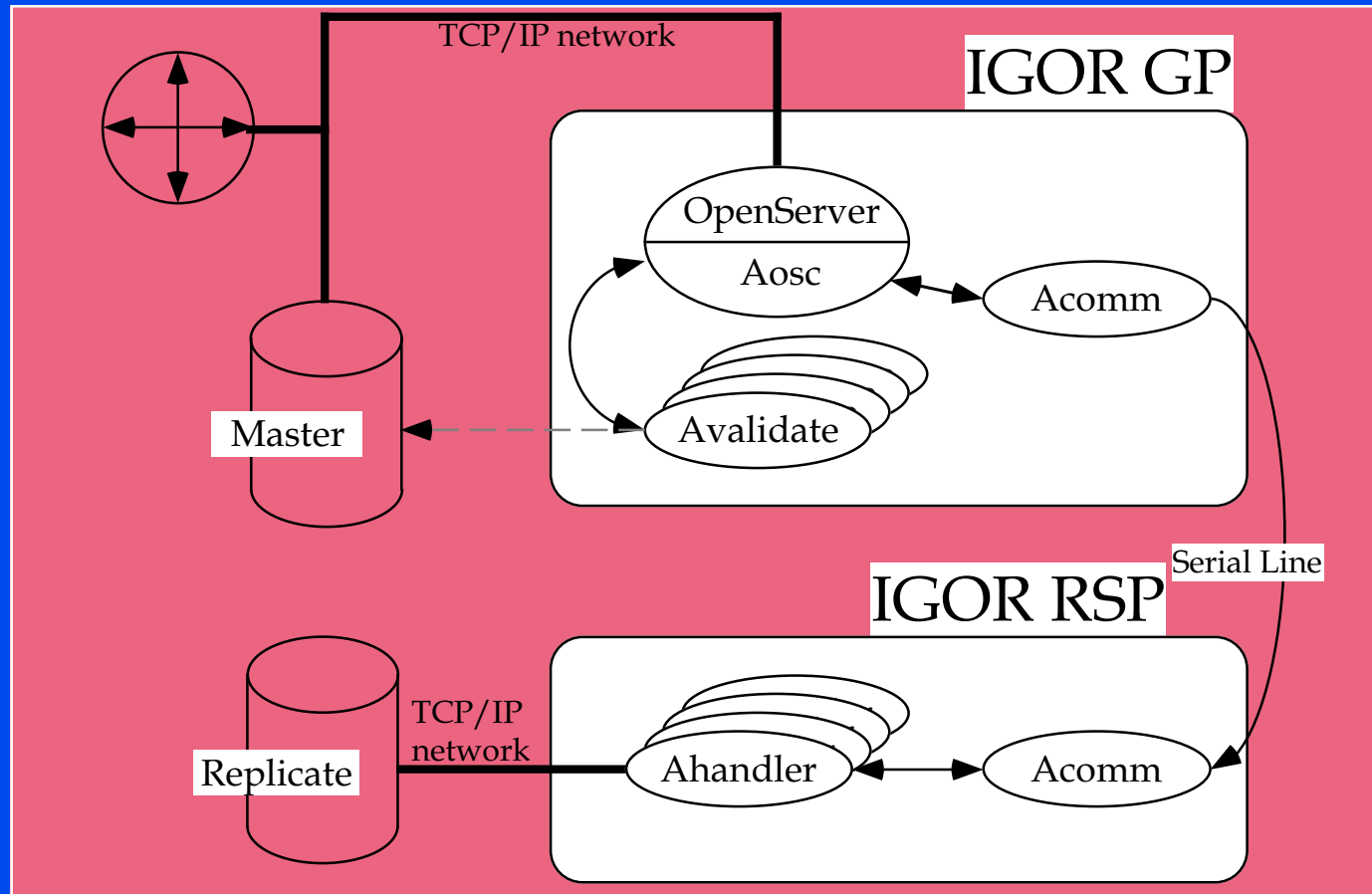


IGOR

Master-Side Control

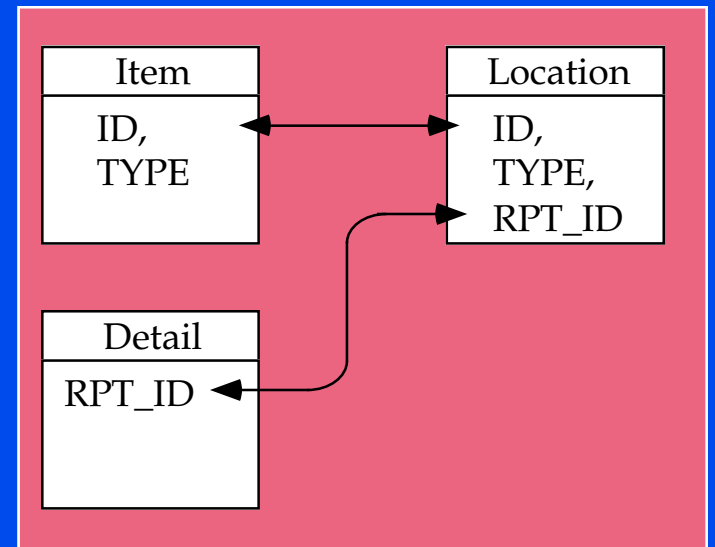


IGOR Processing Modules



Complication

- Replicated table does not always include critical values
- Rep server cannot filter; IGOR cannot directly validate
- Requires “multi-table filtering” in IGOR



Features

- Fully multi-threaded
 - Multiple source databases per replication server
 - Multiple replication servers
- Near real-time delivery of changes
- Two-person rule support for all admin actions



Limitations

- Not designed to transport “bit blobs”
- Multi-table filtering can add a significant transaction load to the master database
- Single security level on GP side; single (but different) security level on RSP side



Key Concept: Security Policy

- Approved by data owners
- Specifies the view allowed in the replicate
- IGOR's job: verify that only information allowed by the policy passes



Status

- Code complete
 - Sun Solaris 2.4, gcc
 - Can probably be ported to other UNIXs
 - Built-in /dev/tty limited to 9600 baud
- Passed accreditation with minor findings

